Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

The present treatment of monotypic genera of fungi *

C. L. SHEAR

In view of the approaching International Botanical Congress to be held in Brussels in 1910, at which it is proposed to provide rules for the nomenclature of the cellular cryptogams, and also in view of the impression which seems to prevail in some minds that the nomenclature of the fungi is in no great need of revision, it may not be inappropriate to call attention to one important phase of conditions as they now exist in mycological nomenclature, namely, the treatment of monotypic genera. Whatever views one may entertain in regard to the type method in general, as a basis of fixing genera and species, we do not anticipate there are many who would deny that genera originally based upon a single species should retain that species. In other words, one would rather expect a monotypic genus always to contain its monotype, however many other species might be added to it. The International Commission of Zoological Nomenclature has already adopted the type method of fixing genera. Their first rule is "a genus proposed with a single original species takes that species as type." In order to show the actual condition prevailing at present with reference to this particular phase of the question, the following cases are cited. These have been selected at random from the Pyrenomycetes and Fungi Imperfecti. Many more cases of the same kind could be found without difficulty.

Coelosphaeria Sacc. Myc. Ven. Spec. 115. 1873 was proposed as a substitute for *Nitschkia* Otth. 1869, which Saccardo regarded as a homonym of *Nitzschia* Hassall 1845. Only one species, *C. Fuckelii* (Nitsch.) Sacc., was included in the genus by Saccardo, *loc. cit.*, and this species happened to be the type of *Nitschkia*, the genus for which *Coelosphaeria* was substituted. Overlooking the fact that this same species was the type of *Cyathisphaeria* Dumort. 1822, note the use of the name *Coelosphaeria* by Ellis and Everhart, N. A. Pyren. 246, 1890. They use the name *Nitschkia* in connection with its original type, thus depriving Saccardo's *Coelosphaeria* of its monotype. The genus is then "emended" by Ellis and Everhart and the name *Coelosphaeria* applied to another group of species.

---

* Read beford Section G of the American Association for the Advancement of Science at the Baltimore Meeting, December 31, 1908.

Cryptosphaeria Grev. Scot. Crypt. Fl. **1**: *pl. 13*. 1823. This, according to the original publication cited, was monotypic, *C. Taxi* (Sow.) Grev. being the only species described or mentioned at that time, although the next year, in Fl. Edin. 359. 1824, the author included many other species. In the original description he says "Sporules always ? naked." In a footnote he says "they [the plants included in the genus] are always also characterized by having their spherules not enclosed in filiform tubes as in the true *Sphaeria*." Thus his description as well as his type excludes ascomycetous fungi. Now this monotype is found in Saccardo, Syll. Fung. **3**: 359 under *Diplodia* Fries 1834, to which genus it had been previously transferred by De Notaris, while *Cryptosphaeria* is cited by Saccardo as having been published at a later date than the original, Scot. Crypt. Fl. **4**: *pl. 201*. 1826, "*pro min. parte*," and is used to include fourteen species of pyrenomycetous fungi, only one of which was ever referred to the genus by Greville and that three years after the original publication of the genus.

Cylindrosporium Grev. Scot. Crypt. Fl. **1**: *pl. 27*. 1822. was based upon the single species *C. concentricum* Grev., which was described and illustrated in the place cited. Unger in 1833, Die Exantheme, 168, added two species to Greville's genus, but these were apparently not congeneric with Greville's species. Later, Berkeley and Broome examined Greville's type specimen and referred his species to the later genus *Gloeosporium* Desm. & Mont. Ann. Sci. Nat. Bot. III. **12**: 295. 1849, thus depriving Greville's genus of its monotype. *Cylindrosporium* was used for a time as a depository for miscellaneous species by Berkeley and others until Saccardo, Michelia **2**: 12, "emended" it and referred two species to it, one of his and one of Berkeley's. Later, in Syll. Fung. **3**: 737, he attributes the name to Unger "em. Sacc." Thus the monotype of Greville's genus has been transferred to a later genus and Greville's name used for another genus and attributed to a later author.

Isothea Fr. Summ. Veg. Scand. 421. 1849. A description of the genus is given and one species mentioned, *Sphaeria rhytismoides* Bab. with a citation of an illustration by Berkeley in Ann. & Mag. Nat. Hist. **6** : 361. 1841. This monotype is transferred by Saccardo to the more recent genus *Laestadia* Auers. 1869 as *L. rhytismoides* (Berk.) Sacc. Syll. Fung. **1** : 224, while *Isothea* is "emended" and restricted to a species, *I. Nyssae* B. & C. Grevillea **4** : 157. 1876, referred to it by Berkeley and Curtis many years later and entirely unknown to Fries and also unknown at present except for the original brief and imperfect description.

Naemaspora Willd. Fl. Berol. 414. 1787. This was published as a monotypic genus, being based on *Sphaeria bombarda* Batsch = *Bombardia fasciculata* Fr., which was later taken from *Naemaspora* and used as the monotype of *Bombardia* Fr. Summ. Veg. Scand. 1849. Authors have since attributed *Naemaspora* to various later writers, including Persoon, Ehrenberg, and Fries. Fries, Syst. Myc. 478, cites Ehrenberg ; Lindau, in Engler and Prantl's Pflanzenfamilien, attributes the genus to Persoon ; and Saccardo says " Pers. em." and spells the name *Naemospora.* All recent authors have applied the name to a group of Fungi Imperfecti having so far as known no particular relation to Willdenow's monotype.

Septaria Fr. Nov. Fl. Suec. **5** : 78. 1819. *S. Ulmi*, the monotype of Fries, now passes as *Phloeospora Ulmi* (Fr.) Wallr. The name was changed to *Septoria* by Fries because of a genus *Septaria* among animals (*cf.* Syst. Orb. Veg. 119. 1825). Saccardo cites Fr. Syst. Myc. **3** : 480. 1829 as the place of publication, where a description is given with mention of two species which had been added to the genus by Desmazières. In Summ. Veg. Scand. 426. 1849, Fries mentions the original monotype, *S. Ulmi*, first in a footnote as one of the type species.

Phloeospora Wallr. Fl. Crypt. Germ. **2** : 176. 1833 was based on two species, the first being *Septoria Ulmi* Fr. The monotype of *Septaria* having been taken from it and placed in the more recent genus *Phloeospora*, the name *Septoria* is applied to another group of species and "emend. Sacc." added, which was apparently regarded as sufficient explanation and justification of the act.

Sphaeropsis Lév. Dem. Voy. in Crim. **2** : 112. 1842 was based upon a single species, *S. conica* Lév. n. sp., the specimens being apparently old, the spores were thought to be free. Later, it was found that the type was an ascogenous form and the species was placed by Cesati and De Notaris in their new genus *Amphisphaeria*, Schem. Sfer. Ital. 49. 1863, becoming *A. conica* (Lév.) Ces. & DeNot., which name has been adopted by Saccardo, Syll. Fung. **1**: 719, while the name *Sphaeropsis* is applied to a great group of species of Fungi Imperfecti and the genus "emended."

It is perhaps unnecessary to cite further instances of this kind to illustrate the present practice of most mycologists. Saccardo has been referred to in connection with most of these cases, not because he furnishes the most notorious examples of this practice, but because his Sylloge Fungorum is a general work widely used and largely followed by mycologists at present. In many cases he simply followed the example of some preferred predecessor. Cases of the same sort can be found in Engler and Prantl's Pflanzenfamilien, Rabenhorst's Kryptogamen-flora and almost any general work on systematic mycology.

The present condition of mycological nomenclature, as indicated by the cases cited, has been brought about apparently in great part by several rather natural causes. One of the most important of these has been the want of accurate knowledge on the part of the earlier writers of the organisms with which they were dealing. With the poor microscopes available and the lack of time or inclination to use them, there is little wonder that important and essential microscopic characters of the smaller fungi were not recognized. Generic characters and descriptions were therefore generally based upon superficial examinations of specimens with the naked eye or a hasty and insufficient study with a magnifier or microscope. As a consequence, the descriptions given were usually very imperfect or erroneous. As the older mycologists seem to have tried to interpret genera by descriptions or concepts instead of appealing directly to the actual organism which the original author used, this may account in part, perhaps, for the neglect of types. All subsequent writers, as well as the author of a genus, appear to have felt perfectly free to take one or all the species from a genus at any time or to modify or amend its description according to their conception of it. This attitude towards the subject also appears to account in part at least for the practice of citing different authors for the same genus or different works of an author as the place of publication. Writers seem to have felt at perfect liberty to attribute a genus to the person whose idea of its limits most nearly accorded with theirs, without particular reference to its treatment or the species included in it by its original author. The place of publication cited for a genus seems either to have been selected upon the same basis or else chosen because it happened to be the most convenient or accessible work. Thus it happens that the ordinary citations for the publication of fungus genera do not, in the majority of cases perhaps, refer to the first or original description or author of the genus. Blind following of authority has also contributed its share towards bringing about the present deplorable condition.

Without adopting some plan of permanently fixing generic names to some particular species, it is difficult to understand how any degree of stability or uniformity can be attained in the use of names.

WASHINGTON, D. C.